

SmartWay Transport Partnership

**Greening Transportation &
Logistics...**

The SmartWay

Clean Cities Conference call

October 24, 2007



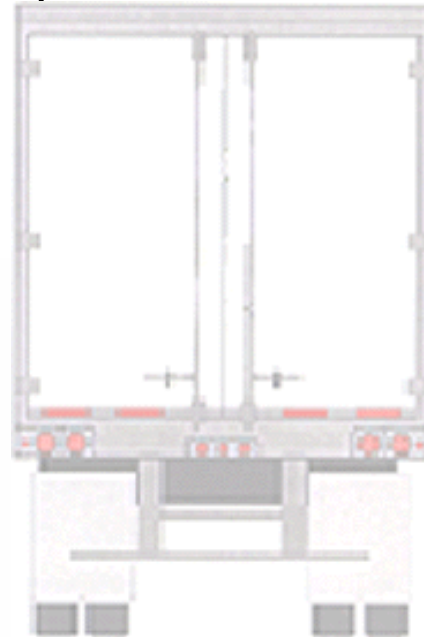
Outline

- **Transportation Background**
- **SmartWay Transport Partnership**
- **Fuel Saving Technologies and Strategies**
- **SmartWay Projects**
- **Transportation Supply Chain**
- **Marketing & Partner Recognition**

Background

- **Commercial freight truck and rail:**
 - Travel over 200 billion miles
 - Consume over 55 billion gallons of fuel today
 - Account for about 20% of transportation related energy use
 - Produce approximately 350 million metric tons of CO₂

**55 billion
gallons of
gasoline and
diesel**



Growing Concerns About Transportation & Climate Change

US Oil Consumption



Personal Vehicles 40%

Other Transportation 27%

Other Sectors 33%

Transportation accounts for about:
2/3 of oil consumption and
1/3 of total CO2 emissions.

US Carbon Emissions

*Includes all fuel sources



Other Sectors 68%

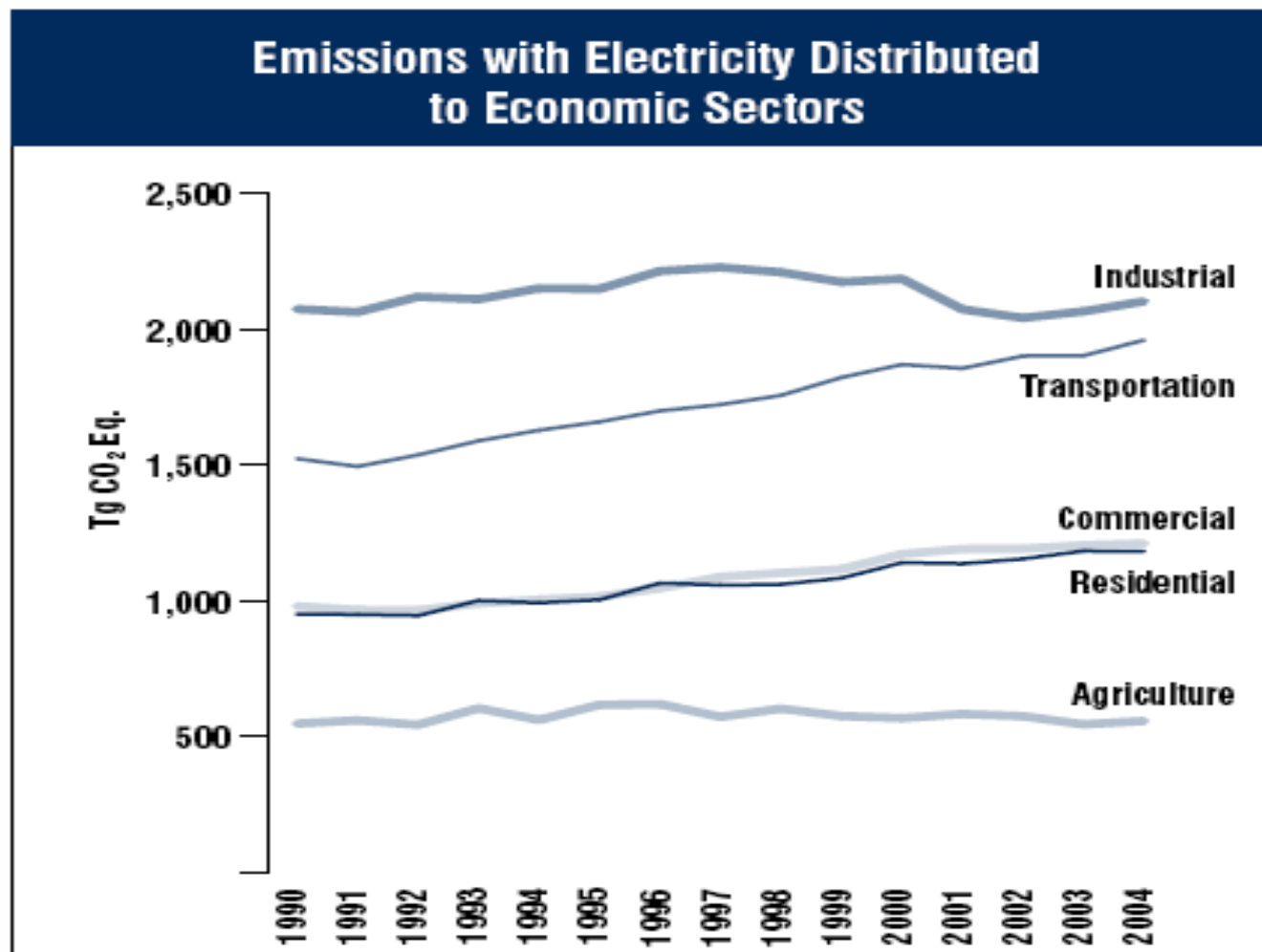


Other Transportation 13%



Personal Vehicles 19%

Transportation Greenhouse Gas Emissions Continue to Increase

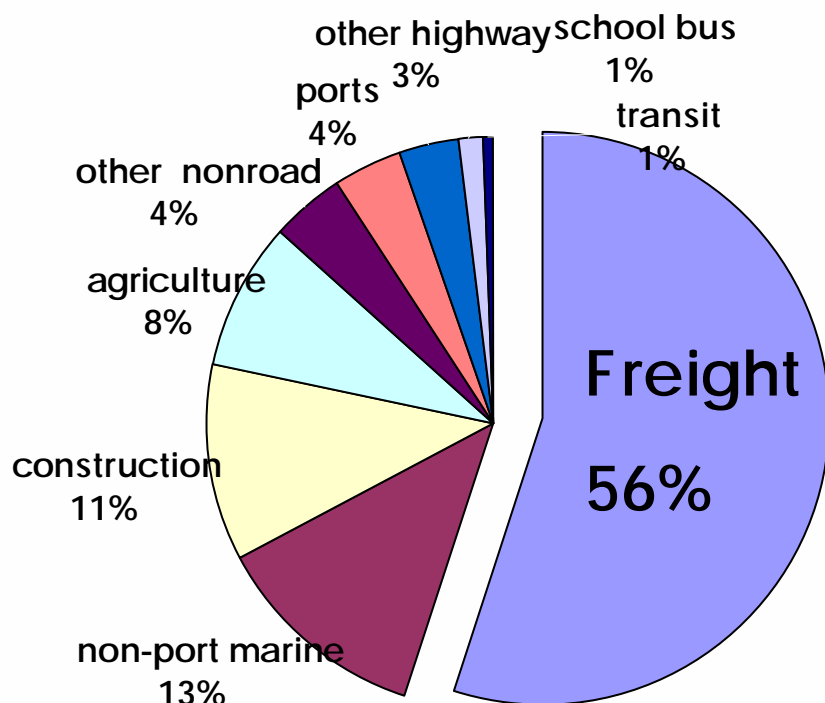


Source: US Emissions Inventory (April 2006)

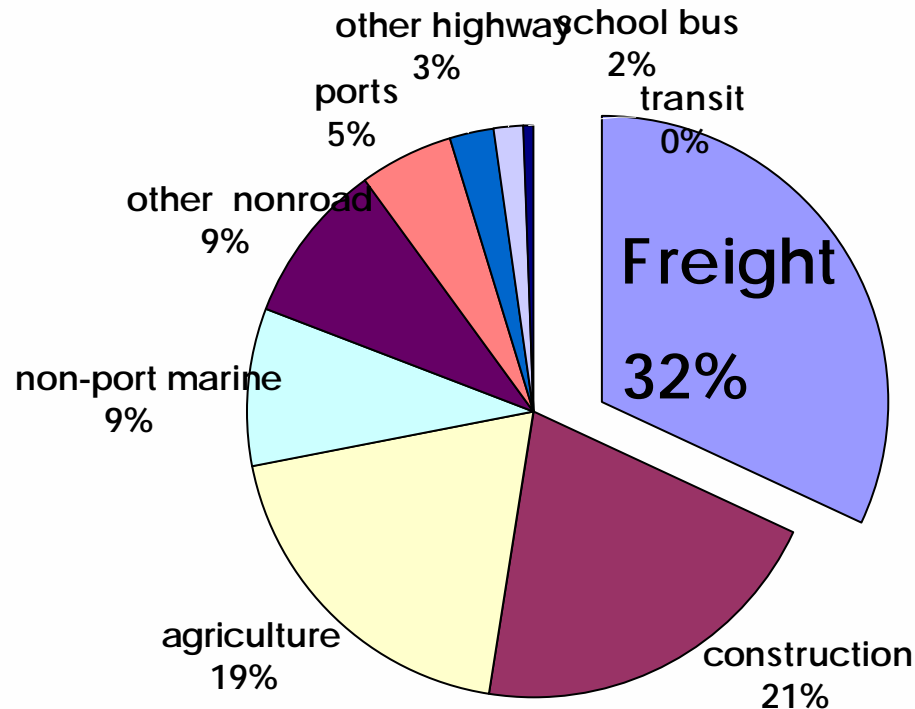
EPA 430-R-06-002

Mobile Source Diesel Emissions Inventory by Sector (2004)

NO_x
(6.3 million tons)

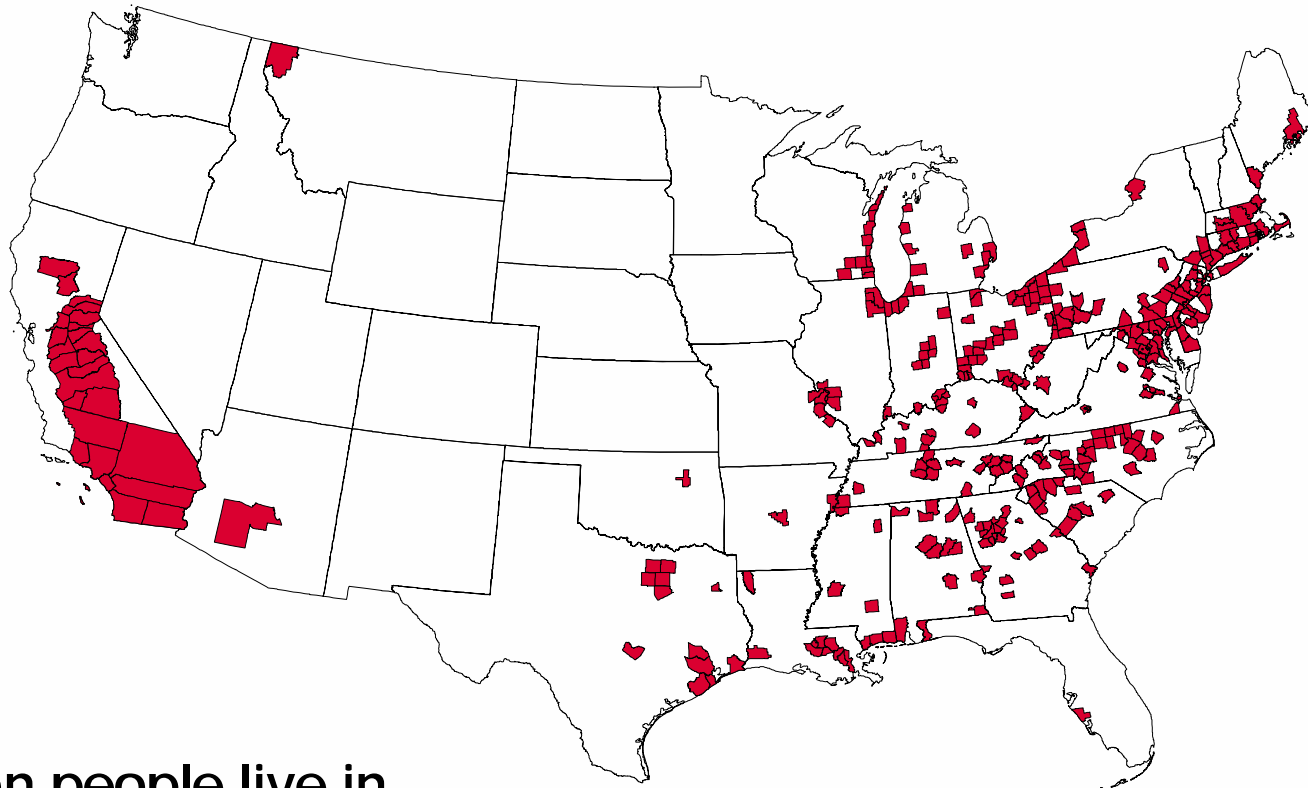


PM 2.5
(305,000 tons)



Air Quality Impacts

Counties Currently Violating Fine Particle ($PM_{2.5}$) and/or Ozone Standards (based on 1999-2001 data)



-80 million people live in areas that do not meet particulate standards.

-160 million people live in areas that do not meet ozone standards.

Communities are taking steps



Your customers and your clients are noticing...



Fuel Trends

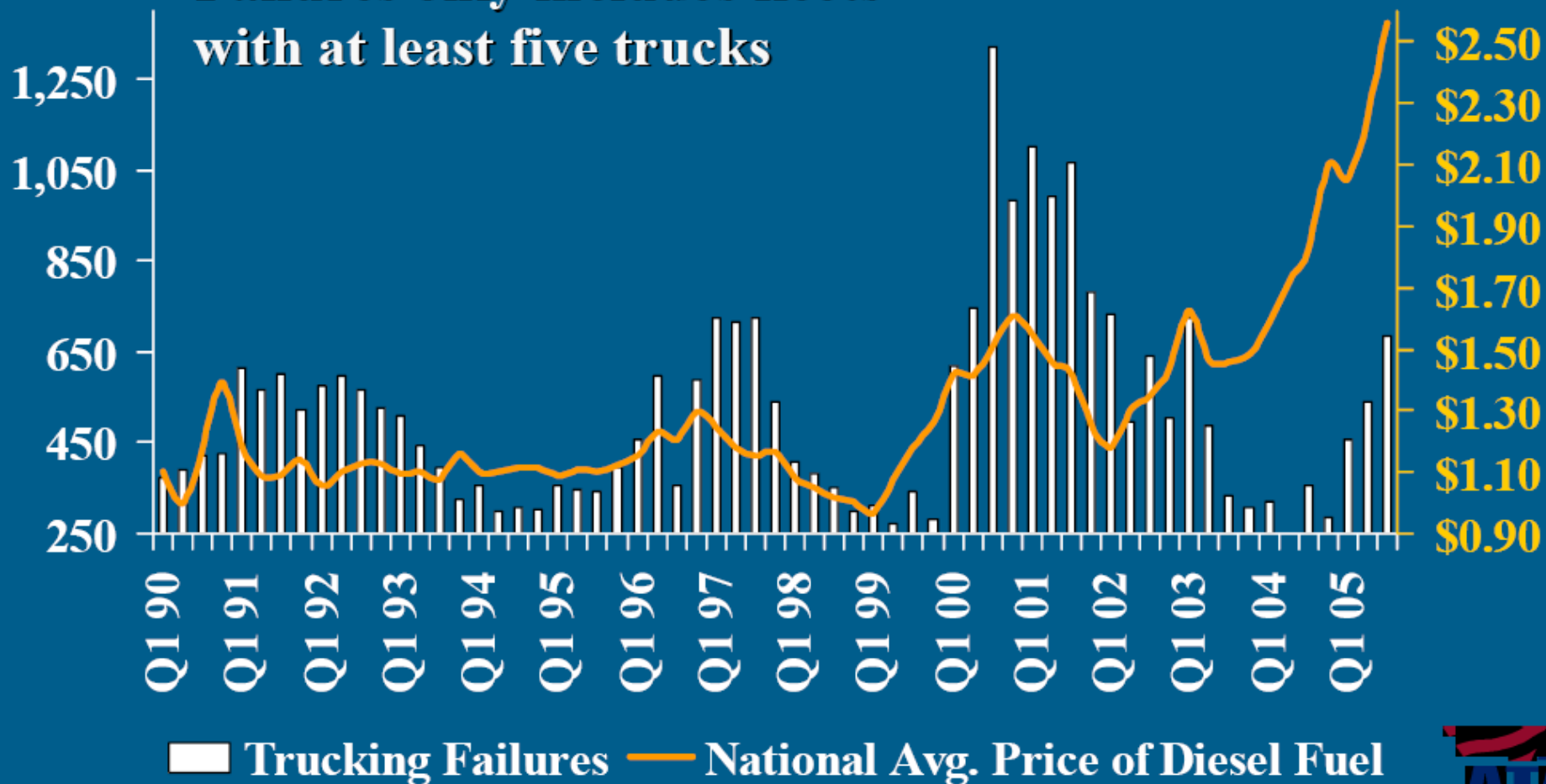
**Weekly U.S Retail On-Highway Diesel Prices
Average All Types**



Source: Energy Information Administration

Fuel Prices Impact on Industry


**Failures only includes fleets
with at least five trucks**



Sources: A.G. Edwards & ATA

Recent Developments

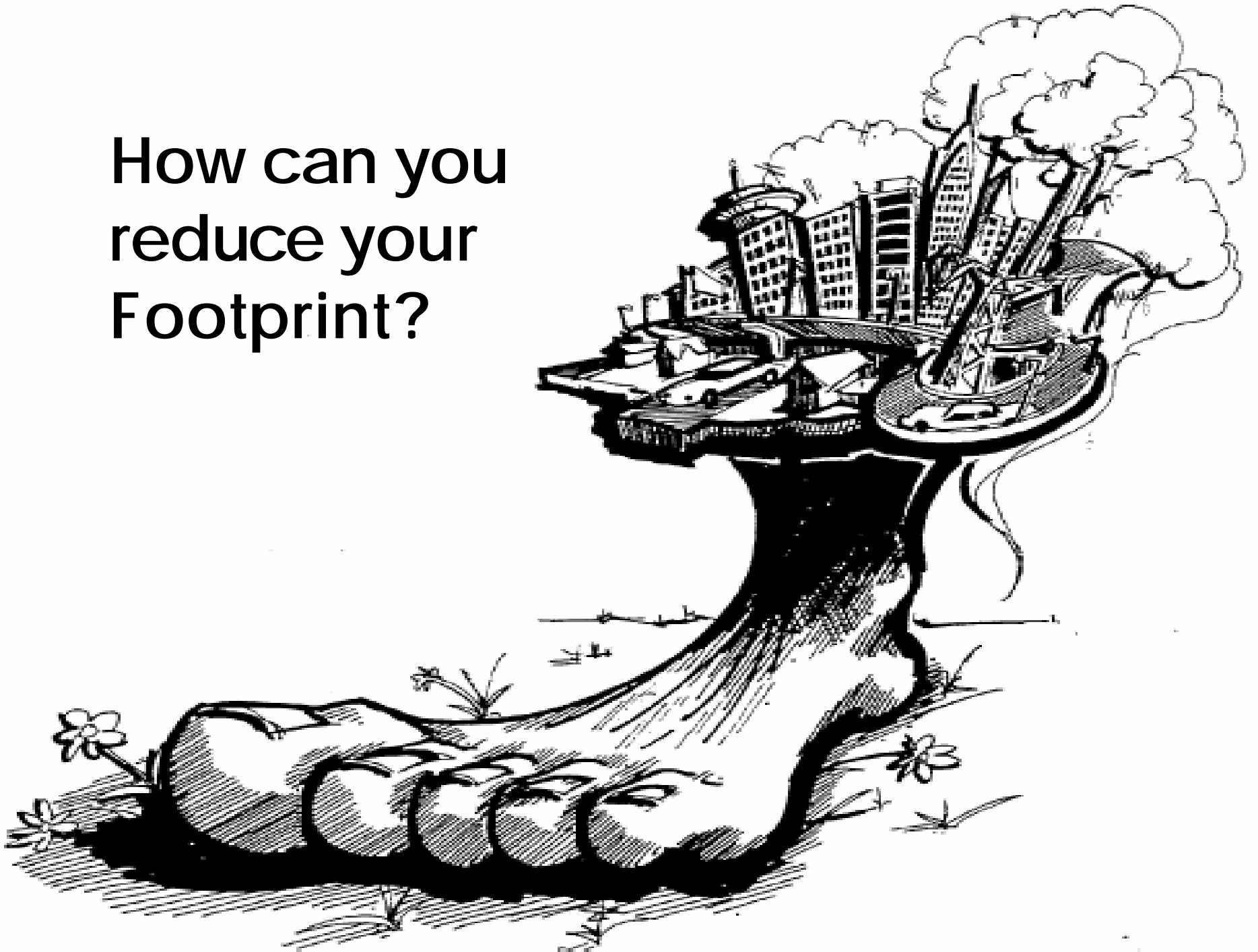
- State and local authorities are addressing climate change by establishing greenhouse gas reduction measures; CA, HI, NJ, FL, New York, Chicago, etc.
- The Supreme court ruled 3/2/07 that CO₂ is a pollutant under the Clean Air Act and EPA has authority to regulate CO₂ emissions;
- The President issued an Executive Order 5/14/07 for regulations that would reduce gasoline consumption and greenhouse gases by 20% in ten years;
- Congress now working on climate change by considering wide range of energy bills, many of which include transportation as a key element.



So what can a corporate citizen do to make a difference?...

Consider your transportation footprint.

How can you
reduce your
Footprint?





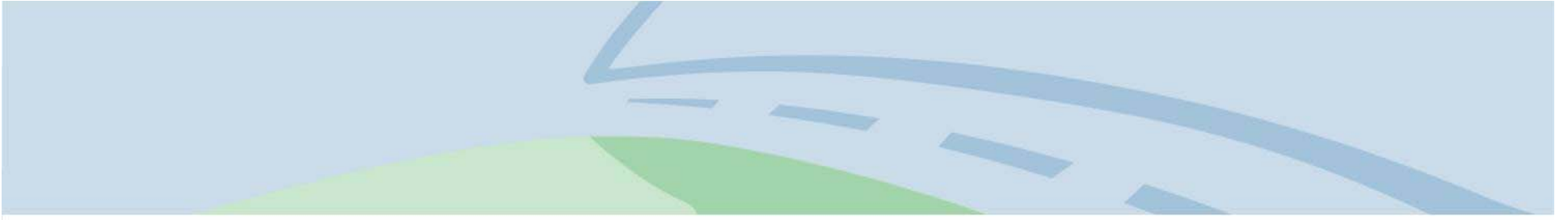
The Partnership

SmartWay Transport Partnership

- Voluntary Partnership w/ground freight industry
- Opportunity for companies to enhance performance of freight operations & supply chains
- Emission Reduction Goals
 - 150 million barrels of oil each year (12 million cars off the road)
 - 33-66 million metric tons CO₂ annually by 2012
 - 200,000 tons NOx annually, plus PM and air toxics reductions

SmartWay Transport Partners today...

- Over 600 SmartWay Partners
- Drive approximately 400,000 trucks
- Travel nearly 16 billion miles per year
- On track to:
 - reduce greenhouse gas emissions by over 3.9 million tons of carbon dioxide emissions per year by end 2007
 - Equivalent to emissions from 680,000 cars
 - Save over 335 million gallons of diesel fuel per year
 - Save the trucking industry nearly one billion dollars in annual fuel and maintenance costs.



Technologies and Strategies

Truck Stop Electrification



Advanced Truck Stop Electrification



Advanced Truck Stop Electrification

Night Light

Lighted On/Off Button for the screen, so you can find it easily in the dark

Card Reader

Slide your member Card and follow instructions

Built-In Touch Screen Computer

Control your "Home-On-The-Road" and surf the Internet

Help

Available 24x7. On-Screen Context-Sensitive Help or dial 611 from your cab phone or 800-738-7024 from any phone

Go Buttons

One-Touch Access to Main Functions

USB Ports

Use a keyboard, mouse or other USB devices

120V ShorePower

Inside and Outside your cab for appliances, block/fuel heaters and other accessories

Internet

High-Speed Ethernet Port for Internet on your Computer - Wireless Internet also available

Central Heat & Air

Thermostat controlled filtered air flow, recycled from your cab

Telephone

Plug in a regular phone for incoming and outgoing calls

Television

Connect your TV with standard COAX cable for Premium Satellite TV



Idle Reduction Technologies

For Trucks and Locomotives

Average fuel savings

Trucks: 1 gal/hr

Rail: 4 - 12 gal/hr

Emissions Controlled

CO₂, NO_x, and PM

- Automatic Shut-Down/Start Up System
- Battery Powered Systems
- Diesel Driven Heating System
- Auxiliary Power Unit/Generator Set
- Truck Stop Electrification



Low Rolling Resistance Tires

Single Wide Base and Improved Duals

Average fuel savings

Trucks: 4 - 5%

Emissions Controlled

CO₂, NO_x

- Single-wide tires and aluminum wheels
 - Reduced rolling resistance
 - Reduced weight
- Low rolling resistance duals can be as effective as singles



Trailer Aerodynamics

Average fuel savings

Trucks: 5%

Emissions Controlled

CO₂, NO_x

- Trailer Fairings, Side-skirts
- Nose Cone and Trailer Tail



Enclosed Auto Trailers



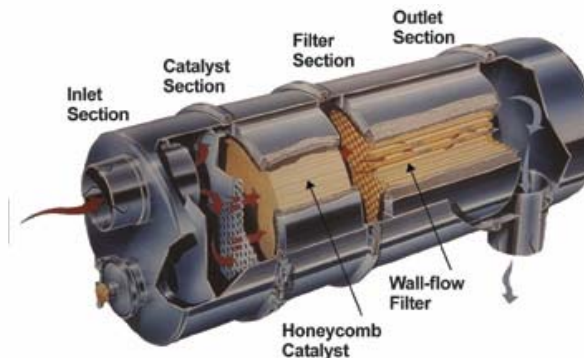
Exhaust After-Treatment Devices

Average fuel savings

Emissions Controlled

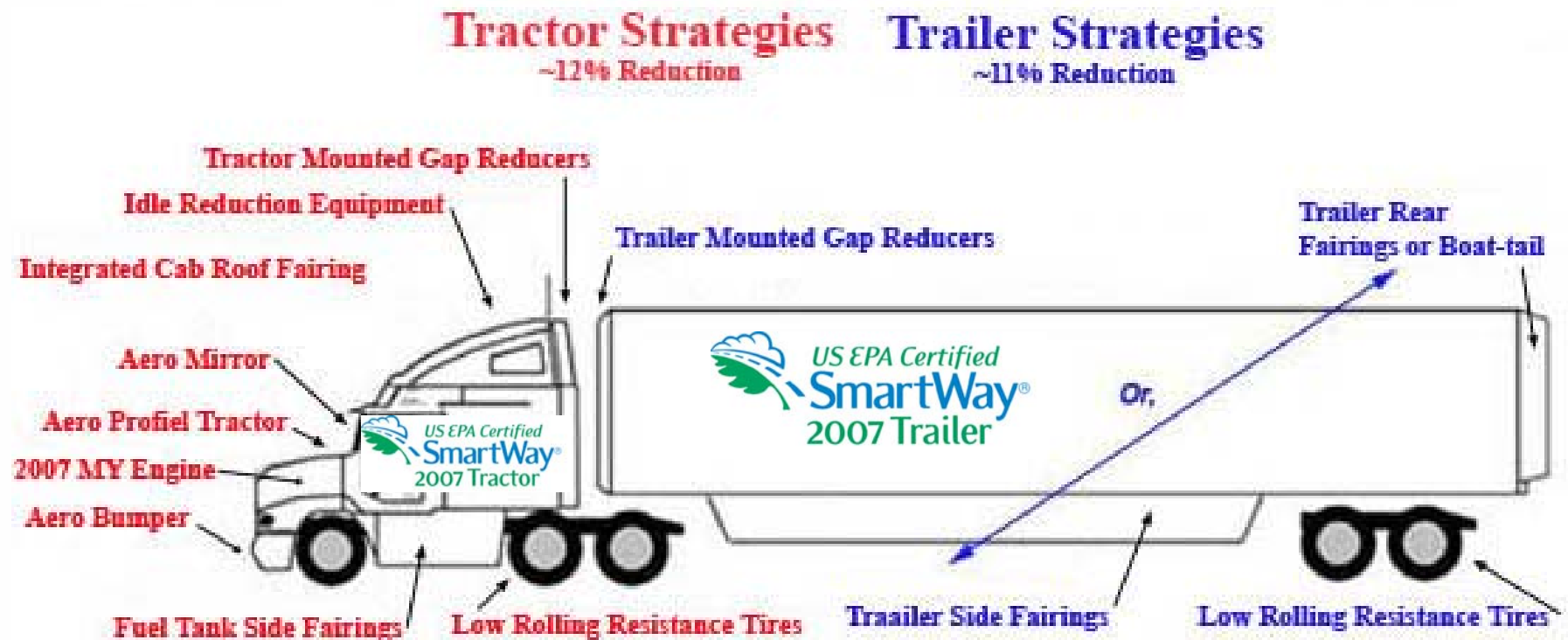
PM

- Diesel Oxidation Catalysts
 - Estimated cost: \$1,000
 - Reduce PM by 25% – 40%
- Particulate Matter Filters
 - Estimated cost \$6,000
 - Reduce PM by 80% – 90%



The SmartWay Truck

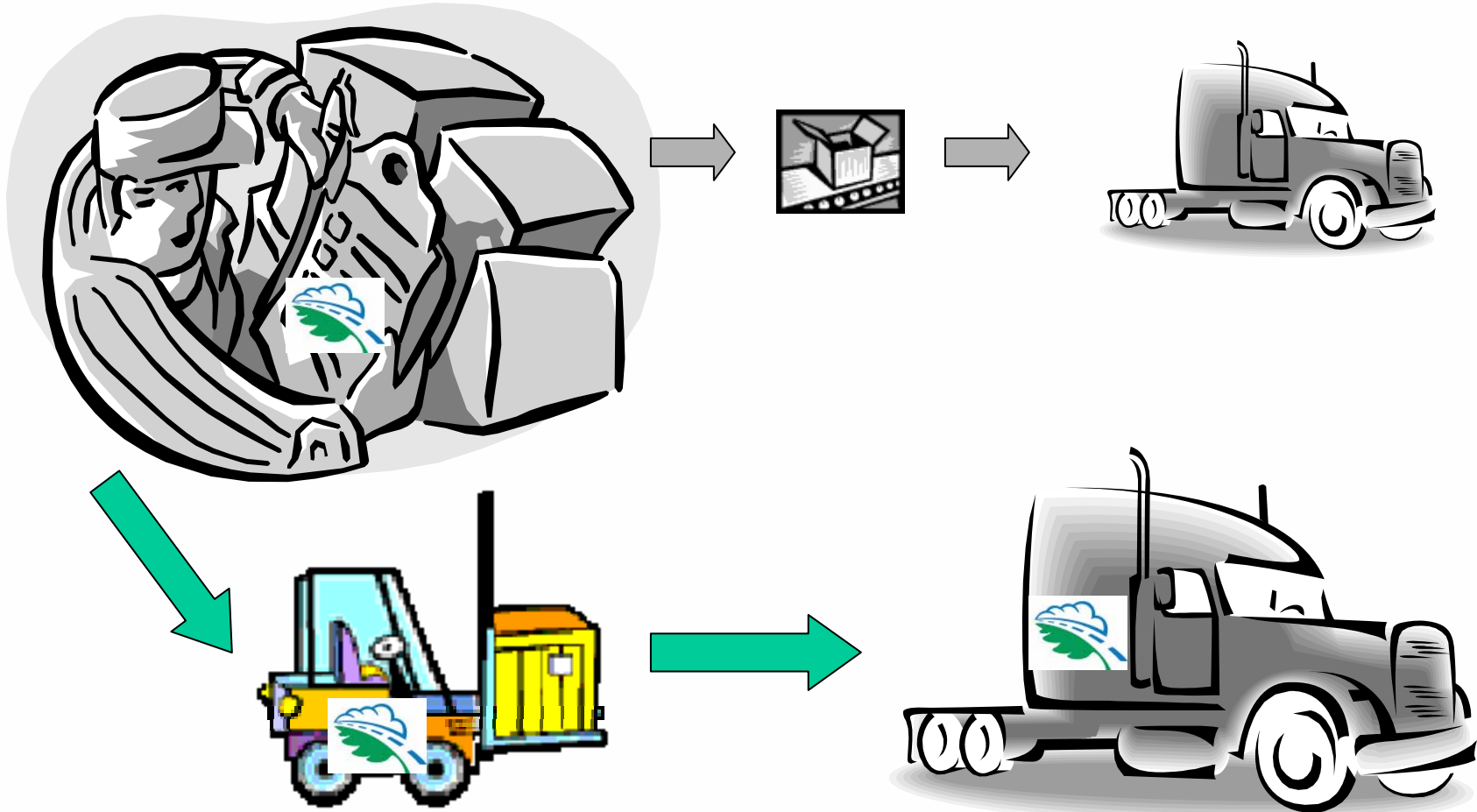
A SmartWay Truck is 20 to 25% more efficient than an average truck on the road today.



The SmartWay Truck



Shippers Ship more freight with SmartWay Transport Carriers



Intermodal Shipping



No-Idling Policies at Loading Facilities



Renewable Fuels



Financing packages



Technology	Cost ¹	Benefits ² (Monthly Fuel Savings)	Monthly Loan Payment @ 9% for 48 months	Net Monthly Savings
Idle Reduction Device – Bunk Heater	\$1,500	\$215	\$37	\$178
Idle Reduction Device – Auxiliary Power Unit (APU)	\$8,500	\$330	\$212	\$118
Aluminum Wheels for Single Wide Tires	\$5,600	\$153	\$139	\$14
Trailer Aerodynamics	\$2,400	\$191	\$60	\$131
Exhaust Aftertreatment Device – Diesel Oxidation Catalyst (DOC)	\$1,200	\$0 (20-50% PM emission reduction)	\$30	--
Exhaust Aftertreatment Device – Particulate Matter (PM) Filter	\$6,000	\$0 (90% PM emission reduction)	\$149	--

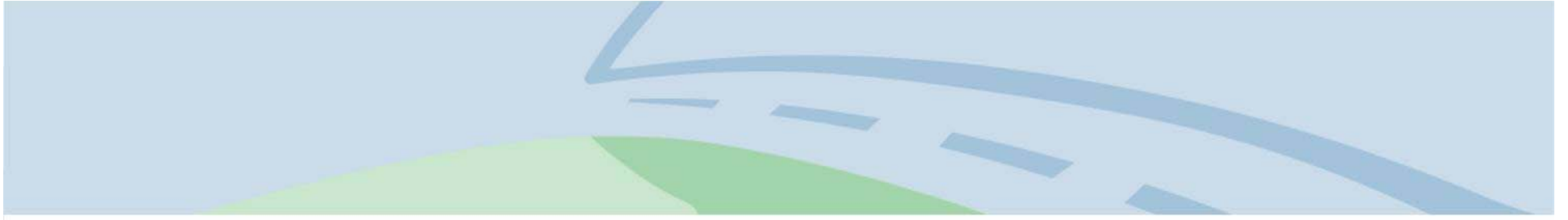
Light Duty Vehicles



Check Out EPA's Green Vehicle Guide

www.epa.gov/greenvehicles

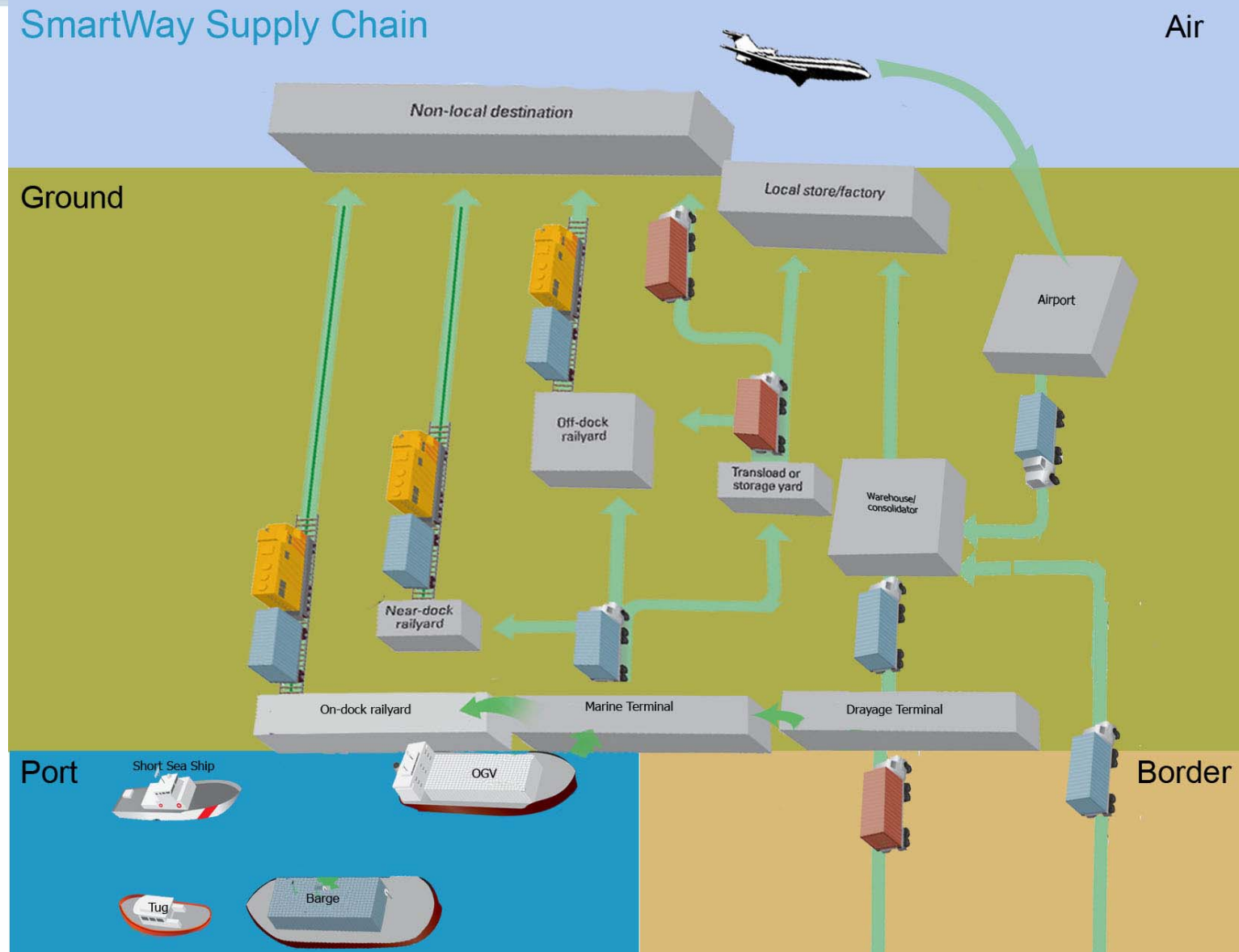




Transportation Supply Chain

What does your world look like?

SmartWay Supply Chain



What does my world look like to you?



Sustainable Ports & Carriers Partnership



NATIONAL CLEAN DIESEL CAMPAIGN



Transportation Supply Chain Program can reconcile these perspectives

Program Components

Partnerships – EPA packaging existing government partnerships & programs

Tools and models - allowing companies to:

- Measure multimodal transportation footprint
- Project emission reduction impacts of technology, strategy and modes

Technology Demonstration- Advance new technologies/fuels

Financial Incentives- access to capital, loan guarantees, public-private capital

Marketing/Media Campaign - Extend SmartWay brand, labeling, public education

Benefits to Industry:

- Ensures a level playing field by providing tools for corporations to measure and improve their entire supply chain transportation emissions footprint.
- Reducing the footprint responds to growing demands from shareholders, insurers, lenders and customers for more sustainable operations.
- Provides incentives and competitive advantage to more fuel efficient transportation providers.

Supply Chain emission reduction strategies and technologies

For Ocean Going Vessels:

- Cold Ironing at port
- Advanced emissions controls
- Retrofits for existing vessels
- Low sulfur bunker fuels
- Salt Water Injection
- Mobile SCR



For Ports Equipment:

- Advanced technologies
- Hybrid Electrics

For Drayage trucks:

- Fleet turnover grants
- Scrappage of older trucks
- Retrofits for remaining trucks
- Idle controls
- Chassis pools





Marketing and Recognition

Marketing



**YOU'RE A CLICK AWAY
FROM A SMARTER SUPPLY CHAIN**



Logistics managers are constantly looking for ways to reduce costs for their customers through customized solutions. SmartWay[™] Transport Partnership is one smart money-saving program grounded in innovative business strategies and new technologies. SmartWay Transport is about streamlined logistics operations that reduce fuel costs while reducing greenhouse gases and other emissions.

To find out more about this collaborative program, please call 1-734-214-4767 or visit www.epa.gov/smartway.



An innovative program from the
U.S. Environmental Protection Agency

Ad Concept 2.23.07

Partner Recognition



Partner Recognition





www.epa.gov/smartway

smartway_transport@epa.gov

phone center (734) 214-4767

Buddy Polovick (734) 214-4928